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**JOINT MILITARY OPERATIONS "... FROM THE SEA" -
REORIENTING NAVAL OPERATIONAL INTELLIGENCE**

by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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Abstract of
JOINT MILITARY OPERATIONS "... FROM THE SEA" -
REORIENTING NAVAL OPERATIONAL INTELLIGENCE

A research paper addressing the future orientation of naval operational intelligence, given organizational changes mandated by Goldwater-Nichols, and changes in operational emphasis as contained in "... From the Sea." The paper reviews the theory and principles of war, operational art and operational intelligence, and incorporates the history of the Office of Naval Intelligence, and the uses of operational intelligence by commanders in World War II. The paper concludes: joint intelligence organizations are fundamental to joint command; the analysis functions performed by naval intelligence are consistent with the littoral region, and all levels of conflict, but now require a broader *maritime* perspective; new and improved intelligence capabilities are required to counter littoral threats, and to effectively sustain joint military operations; and, intelligence is an indispensable component of naval combat power -- a key ingredient of the operational capabilities called for in "... From The Sea "

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JOINT MILITARY OPERATIONS "... FROM THE SEA" -
REORIENTING NAVAL OPERATIONAL INTELLIGENCE

CHAPTER I

INTRODUCTION

"... *From The Sea*". The decisive factor in warfare has often been operational intelligence. Nothing else has been so universally used and emphasized by successful commanders throughout the spectrum of conflict. Intelligence is the basis of all plans and operations -- in peace, crisis, and war. The Department of the Navy's White Paper "... From the Sea" "represents a fundamental shift away from open-ocean warfighting on the sea toward joint operations conducted from the sea."¹ This shift has profound implications not only for future naval operations but also for naval intelligence.

Goldwater-Nichols. The Goldwater-Nichols Department of Defense Reorganization Act of 1986 formally charged the unified combatant commands with the responsibility and authority for the conduct of military operations in their respective geographic areas of responsibility.² Changes in command structure such as the designation of joint task force (JTF) commanders now require Naval Service N-2's and G-2's to serve as a JTF commander's J-2. These joint requirements, combined with the new direction in "... From The Sea," drive the scope and focus of the intelligence effort to a broader *maritime intelligence* vice a

strictly naval intelligence role.³

The Office of Naval Intelligence. The role the Office of Naval Intelligence (ONI) has played since its creation in 1882 in the strategic direction and operations of the Navy has been significant. Applying theories on the art of war then circulating among the more progressive officers, one of ONI's early founders Ensign Charles Custis Rogers argued successfully not only for the viability of naval intelligence, but for the modernization and growth of the New Navy.⁴ "Rogers explained how an intelligence office served the peacetime Navy by collecting vital information to prepare it for future war."⁵ He also warned that "unless the American service studied every aspect of a potential enemy's resources and capabilities, the U.S. Navy might one day suffer humiliation at the hands of a second-rate naval power."⁶ This warning could not be more true today with the U.S. Navy now operating increasingly in the littoral waters of the world.

The Problem. The purpose of this paper is to examine the implications of these changes for naval operational intelligence -- functionally, organizationally, and operationally. Certain enduring principles can be determined through the study of the theory of war and historical analysis, as did Ensign Rogers over a century ago. But more importantly, the increased sophistication and complexity of modern warfare has made the integration of intelligence into military operations increasingly demanding and challenging. Consequently, the

implications of these changes are not all readily apparent or clear, for the naval leadership or the intelligence professional. The principal aim of this research is to reorient naval operational intelligence to ensure timely, accurate, and relevant contributions by the personnel and resources of the Office of Naval Intelligence, and to promote the operational effectiveness of the United States Navy in future joint military operations from the sea.

CHAPTER II
INTELLIGENCE AND COMMAND

"Now the reason the enlightened prince and the wise general conquer the enemy whenever they move and their achievements surpass those of ordinary men is foreknowledge. What is called 'foreknowledge' cannot be elicited from spirits, nor from gods, nor by analogy with past events, nor from calculations. It must be obtained from men who know the enemy situation."

Sun Tzu, 350 B.C.

The Art of War. What Sun Tzu refers to above as early as 350 B.C., translated as 'foreknowledge,' is commonly referred to in military circles today as intelligence. "By "intelligence" we mean every sort of information about the enemy and his country -- the basis, in short, of our own plans and operations,"⁸ wrote Carl von Clausewitz in observing the Napoleonic Wars (1792-1815). Clausewitz's definition of intelligence will be used for purposes of this paper. Another famous theorist from the same era, Baron de Jomini, also believed in the importance of intelligence. He asks, "In fact, how can any man say what he should do himself, if he is ignorant what his adversary is about?"⁹

The Principles of War. These theorists and others have written about the principles of war. A select list of these principles contained in *Table I* below shows a remarkable similarity and consistency in their views, most notably in the priority given to the *objective*.

Table I
*The Principles of War*¹⁰

<i>Sun Tzu</i>	<i>350 BC</i>	<i>Objective, unity, deception, initiative, adaptability, environment, security.</i>
<i>Clausewitz</i>	<i>1830</i>	<i>Objective, offensive, concentration, economy, mobility, surprise.</i>
<i>Jomini</i>	<i>1836</i>	<i>Objective, maneuver, concentration, offense, deception.</i>
<i>Mahan</i>	<i>1890</i>	<i>Objective, concentration, offense, mobility, command.</i>
<i>Corbett</i>	<i>1918</i>	<i>Objective, concentration, flexibility, initiative, mobility, command.</i>
<i>FM 100-5</i>	<i>1993</i>	<i>Objective, offensive, mass, economy of force, maneuver, unity of command, security, surprise, simplicity.</i>

Principles of Intelligence. The central tenet of intelligence work is to 'know the enemy.' The primary purpose and application of intelligence resources is to "assist commanders in identifying military objectives."¹¹ The classic intelligence cycle -- planning and direction, collection, processing, production, and dissemination -- revolves around the commander's mission and is a fundamental part of plans and operations, consistent with our definition of intelligence. This is reflected in the principles of intelligence contained in *Table II* below.

The three major intelligence analysis functions are indications and warning (I&W), situation assessment (SA), and targeting (TA).¹² Each of these analysis functions correspond to defensive, transition from defense to offense (and the reverse, i.e., offense to defense), and offensive purposes or actions, respectively. These functions will be used again to

analyze events in World War II and the key operational capabilities called for in "... From The Sea." The substantive product of these analysis functions is part of the commander's mission.

Table II
The Principles of Intelligence

<i>Platt</i>	<i>Strategic Intelligence</i>	<i>Purpose, definitions, exploitation of sources, significance, cause and effect, spirit of the people, trends, degree of certainty, conclusions.</i>
<i>Heymont</i>	<i>Combat Intelligence</i>	<i>Mission, useful, timely, integral, commander's needs, planning, flexibility, imagination and resourcefulness, security.</i>
<i>Joint Pub 2-0</i>	<i>Intelligence Purposes & Applications</i>	<i>Identify & determine objectives, support commander, targeting, plan & conduct ops, security, I&W, terminate ops, deterrence.</i>
<i>Joint Pub 2-0</i>	<i>Joint Intelligence</i>	<i>Joint Force Cdr (JFC) determines direction, view enemy as joint/unified, constitute a joint intel staff, ensure mutual support & sharing, make organic intel avail to JFC, pursue interoperability.</i>
<i>Naval Doctrine Pub 2</i>	<i>Naval Intelligence</i>	<i>Know the adversary, Cdr drives intel, unity of effort, intel is ops & ops is intel, plan for combat, force security, use an all-source approach.</i>
<i>Naval Doctrine Pub 2</i>	<i>Naval Intelligence Purposes</i>	<i>Support the Cdr, identify & determine objectives, plan & conduct ops, security of ops (avoid deception & surprise), security of ops (through deception), reorienting forces/terminating ops.</i>

Operational Art. Operational art is defined as:

"the skillful employment of military forces to attain strategic and/or operational objectives within a theater through the design, organization, integration, and conduct of theater strategies, campaigns, major operations, and battles."

It is precisely here at the operational level of war that

intelligence plays an integral part of planning and execution. A comparison of the principles of war with the principles of intelligence illustrate this relationship, particularly when using Joint Pub 2-0's principles of intelligence purposes and applications, and Naval Doctrine Pub 2's principles of naval intelligence purposes. Intelligence and operations are inextricably linked. A closer examination of the subject will reveal how intelligence caters to many of the principles of war, affords opportunities, and even helps create the conditions for success. Table III below highlights the dual planning and execution responsibilities at the operational level of war and command with its related intelligence organization.²⁰

Table III
Planning & Execution Responsibility

<i>Responsibility</i>	<i>Level of War & Command</i>	<i>Intelligence Organization</i>
<i>Planning</i>	<i>Strategic, e.g., NCA, CJCS</i>	<i>CIA, DIA, NSA, etc.</i>
<i>Planning & Execution</i>	<i>Operational, e.g., Unified CINC, CJTF</i>	<i>Joint Intelligence Center (JIC)</i>
<i>Execution</i>	<i>Tactical, e.g., Service unit level</i>	<i>Service organic line/staff</i>

Operational Intelligence. Joint Pub 2-0 defines operational intelligence as:

"the information about the adversary and the environment required for (1) determining the commander's objectives, (2) selecting options, (3) planning operations, (4) conducting operations, (5) analyzing the effects of operations. To effectively develop and refine intelligence support for combat operations, the commander must guide the efforts of his operations and intelligence staffs in an iterative

*and interactive process.*²¹

Another definition of operational intelligence more closely tied to the concept of operational art is found in FM 34-1:

"...intelligence which is required for the planning and conduct of campaigns within a theater of war. At the operational level of war, intelligence concentrates on the collection, identification, location, and analysis of strategic and operational centers of gravity. If successfully attacked, they will achieve friendly political and military-strategic objectives within a theater of war..."

In addition to identifying 'centers of gravity,' intelligence also contributes directly to the commander's decision-making process as this process is concerned with risk assessment and management. Intelligence does this by assessing enemy capabilities and intentions, thereby reducing uncertainty.²³ Knowing oneself and the enemy allows employment of friendly strengths against enemy weaknesses, and avoids exposing friendly weaknesses to enemy strengths.²⁴ Intelligence is fundamental to command.

CHAPTER III

OPERATIONAL INTELLIGENCE IN WORLD WAR II

World War II. The World War II examples which follow were chosen because they are representative joint military operations conducted from the sea, e.g., Admiral Chester Nimitz's command at the Battle of Midway, General Douglas MacArthur's Southwest Pacific Campaign, and General Dwight Eisenhower's command of Operation OVERLORD - the invasion of Normandy. These examples not only illustrate the joint aspects of warfighting and the role of operational intelligence, but also depict the distinct yet overlapping intelligence analysis functions and the major contribution this analysis made to the operational art of the respective commanders.

The Battle of Midway. After the outbreak of war in the Pacific Theater with the Japanese surprise attack on Pearl Harbor, signals intelligence was instrumental in providing *indications and warning* of further Japanese intentions. "From numerous intercepts Rochefort and Layton were able to piece together a remarkably complete intelligence estimate of the Japanese plan for the attack on Midway ..."²⁵ Armed with this foreknowledge, Admiral Nimitz was able to generate sufficient mass at the proper time and place. By achieving surprise and attacking effectively first,²⁶ he turned back the Imperial Japanese Fleet at what was to be the culminating point of their eastward advance. All forces in the Hawaiian area including Army Air

Corps Seventh Air Force bombers came under Admiral Nimitz's unified command.²⁷

Nimitz's orders were to "inflict maximum damage on the enemy" and to avoid "exposure of your force to attack by superior enemy forces without prospect of inflicting, as a result of such exposure, greater damage to the enemy."²⁸ American losses included one carrier and one destroyer sunk, 307 men killed, 147 aircraft lost and extensive damage to installations on Midway. By comparison, Japanese losses included four carriers and one heavy cruiser sunk, another heavy cruiser wrecked, one battleship, one oiler, and three destroyers damaged, 322 aircraft lost, and 2,500 men killed, including many experienced pilots.²⁹ Such results could not have been achieved without 'foreknowledge' - unambiguous *indications and warning*.

The importance subsequently attached to signals intelligence, then referred to as "ULTRA" in both the Pacific and European Theaters, is reflected in since declassified letters from the War Department, Chief of Staff General Marshall to Generals MacArthur and Eisenhower asking that the use of this "vital source of intelligence"³⁰ be given their personal attention.³¹ "ULTRA" had served Admiral Nimitz's purposes most admirably.

Southwest Pacific Campaign. Intelligence also played an important role in General MacArthur's 2,500 mile advance from Papua New Guinea to the Philippines, made with a record-breaking minimum of casualties. Timely and accurate situation assessment

was essential since MacArthur proposed bypassing strong points with his own weaker forces. The objectives or decisive points as they were, were where the Japanese were not, or at least were vulnerable.

*"... it was absolutely essential to know the whereabouts of the Japanese, the nature and vulnerability of their supply lines, and the chances for outguessing them in the art of flowing around them. Accurate information was the sine qua non of the whole planning function in leapfrog war. MacArthur's shoestring operations could not have been pushed to successful conclusion without a flood of intelligence data of every category."*³²

Jungle-wise coast watchers operating behind enemy lines created a powerful sea-air-ground surveillance network in which it became impossible for the enemy to move without intelligence reports being flashed in advance to allied forces.³³ The coast watchers alerted the thin force of Allied planes to be ready and in the air for Japanese attacks. They also reported on Japanese ship movements enabling the Navy and Air Force to find their targets at sea. All-source intelligence provided MacArthur with "accurate knowledge of Japanese dispositions and defensive strategies, and allowed him to craft his operational plans to take greatest advantage of Japanese weakness."³⁴ Comprehensive situation assessment provided the key to successful maneuver warfare by General MacArthur's multi-service forces operating from the sea.³⁵

Air Campaign OVERLORD. Intelligence contributed significantly to the planning of Operation OVERLORD from the outset by assessing the disposition and strength of opposing German

forces, but it also was instrumental in bringing about the necessary pre-conditions for a successful operation. This was done through knowledgeable and insightful targeting.

As Supreme Commander, Allied Expeditionary Forces, General Eisenhower insisted on commanding all Allied sea, air, and land forces, including the Strategic Air Forces comprised of British Bomber Command and U.S. Eighth Air Force. This was done despite Air Force objections about what they considered to be the 'tactical' use of a 'strategic' asset.³⁶ Eisenhower's operational art, facilitated by the deep penetration achieved by multiple intelligence sources, would put these assets to optimum use.

The conditions necessary for a successful invasion included the reduction of Luftwaffe fighter strength, tactical surprise (which called for extensive operational deception and operational security measures), and the extent to which the Allies could reduce and delay the arrival of German reinforcements.³⁷ Through successful operational fires targeted against the Luftwaffe, the transportation network, and the German synthetic oil industry, these pre-conditions were effectively created.³⁸

Aerial reconnaissance, agent reporting (which included British double-agents feeding the Germans false information), and "ULTRA" all contributed to the selection of targets in the air campaign.

"One intelligence officer who handled "ULTRA" at Eighth Air Force later claimed that these intercepts, indicating that petroleum shortages were general and not local, played a crucial role in convincing all concerned that the air offensive had uncovered a weak spot in the German economy and led to exploitation of this weakness to the fullest extent."³⁹

Interdicting the fuel supply had the double effect of degrading Luftwaffe operations and impeding the movement of ground forces on the continent. The air campaign did not win the war, but through effective targeting, it did help create the conditions necessary for a successful invasion. Operational deception and operational security considerations also played heavily in target selection during the air campaign.⁴⁰

Joint Intelligence Centers. Admiral Ernest King recognized early in the war the business at hand was intelligence for operational planning and combat directed by his office and "action agencies in the field, such as advanced joint intelligence centers."⁴¹ The emphasis on joint planning prompted King and Marshall to push for closer liaison between ONI and the Military Intelligence Division (MID). The harmonious relationship between the Director of Naval Intelligence Admiral Train and the head of G-2 Major General Strong minimized any conflict in reorganizing military intelligence toward a joint effort.⁴²

In a limited way ONI had performed operational intelligence when it mobilized Coastal Information Sections in early 1941. However, poor organization, equipment, and lack of training yielded poor results. To remedy this situation, a basic

intelligence school in Maryland, and an Advanced Naval Intelligence School (ANIS) in New York were created, and an Operational Intelligence Branch was established in ONI.⁴³

The Advanced Intelligence Center Southwest Pacific Force and other operational units sought additional operational intelligence officers immediately.⁴⁴ The Intelligence Center, Pacific Ocean Area (ICPOA) came into being in September 1942 and later became the Joint Intelligence Center Pacific Ocean Area (JICPOA) in September 1943. JICPOA became an integral part of the Staff of CINCPAC-CINCPOA, Admiral Nimitz.⁴⁵ JICPOA reflected the "Joint" nature of Nimitz's command. "Members of the army, navy, air force, marines and coast guard all helped make it one of the most effective intelligence organizations in military history."⁴⁶ The planning of Operation OVERLORD also called for the "creation of a joint intelligence staff at Supreme Headquarters Allied Expeditionary Forces (SHAEF) (later to be called the Combined Intelligence Staff) in February 1944, and of a JIC SHAEF in July."⁴⁷ Similarly, MacArthur's G-2 section reflected the joint and combined nature of his operations.⁴⁸ A narrative written by the Deputy Officer in Charge of JICPOA, Captain Holmes in 1945 concludes:

"Ample experience has demonstrated that neither Army Intelligence nor Naval Intelligence is complete without the other. On theater and higher level, joint intelligence is necessary. Liaison and interchange of information is not enough to secure complete exploitation. Complete merger of Army and Naval Intelligence is necessary."

Today, consistent with the unified command structure, joint

intelligence centers (JICs) have been brought back. It is the J-2 who now has "primary responsibility for providing or producing the intelligence required to support the joint force commander, his staff, components, task forces, and elements."⁵⁰ The existing naval operational intelligence infrastructure, consisting of the ocean surveillance information system (OSIS) nodes and fleet intelligence centers (FICs), has been absorbed into these newly created JICs. This is, no doubt, the proper organization. Intelligence is integral to command and unity of command demands unity of intelligence effort.

But what is this new identity, or role for naval operational intelligence ... in a joint environment ... with a new direction? The dilemma in defining what is in the 'naval interest'⁵¹ too narrowly or too broadly is a serious one, particularly when considering the potential operational consequences -- relevance, success or failure.

CHAPTER IV
THE NEW DIRECTION - "... FROM THE SEA"

"The conventional division of the globe into land and marine areas, controlled respectively by land and naval forces, has always been highly arbitrary. The fact that war at sea calls for different techniques from war on land is too often permitted to obscure the more fundamental truth that naval operations are important primarily because of their influence on land campaigns, and conversely, that many great land campaigns are carried through chiefly to secure an advantage in the war at sea. Moreover, there are large and important areas in which operations ashore and afloat are associated in the most intimate manner."⁵²

The Principles of Maritime Strategy. The above excerpt sets aside commonly held service parochialisms and biases, and gets right to the 'fundamental truth.' "The seat of purpose is on land."⁵³ As Sir Francis Bacon wrote, "This much is certain, he that commands the sea is at great liberty and may take as much or as little of the war as he will, ..."⁵⁴ This is one of the great advantages of a naval power and naval forces per se. Julian Corbett points out that *naval strategy* is but that part of a *maritime strategy* involving land forces "for it scarcely needs saying that it is almost impossible that a war can be decided by naval action alone."⁵⁵

It follows that *maritime intelligence*, as distinct from *naval intelligence*, is thus concerned with a broader area of interest including the littoral regions comprising "seaward"⁵⁶ and "landward"⁵⁷ battlespace. "Littoral war as here understood

is the war fought across the shorelines of the territories of one, or more participants.⁵⁸ Modern warfare has increasingly made irrelevant the distinction between land and naval areas. The capabilities inherent in today's naval expeditionary forces erase these artificial bounds.

The International Security Environment. For the first time since World War II, the free nations of the world claim preeminent control of the seas and ensure freedom of commercial maritime passage.⁵⁹ Up until the end of the Cold-War, post-World War II naval policy largely was an attempt to defend sea control, to the extent that the Western Allies had seized sea control from Germany and Japan in 1944-45.⁶⁰ The diminished threat to blue-water operations leads us directly into the "large and important areas in which operations ashore and afloat are associated in the most intimate manner"⁶¹-- the world's littoral regions.

Critics of "... From The Sea" who say the White Paper "ignores traditional tasks on the high seas"⁶² fail to recognize a fundamentally changed international security environment, and the need for the Navy to change its operational emphasis to suit the needs of that environment. As the U.S. withdraws from overseas bases, naval forces will become even more relevant in meeting American forward presence and crisis response requirements. Critics who say "it is just more of the same old Cold War thinking"⁶³ fail to acknowledge the broad range of missions naval forces perform in peacetime, crisis situations,

and limited war.

At the height of the Cold War sea control was the primary mission of the Navy, and consistent with this mission, ocean surveillance was the primary focus of naval intelligence. Detecting, tracking, and targeting enemy forces *at sea* became synonymous with operational intelligence, more colloquially referred to in the Navy as OPINTEL. In today's security environment, in the littoral regions, the primary mission of the Navy goes beyond sea control, and so does the focus for naval intelligence. The generic analysis functions used in this paper, however -- indications & warning, situation assessment, and targeting -- still apply uniformly across the spectrum of conflict, to seaward and landward battlespace, whatever the mission assigned may be.

Missions - Beyond Sea Control. Unlike the World War II examples used earlier, the U.S. is not at war, yet still finds itself in a world defined by regional conflict and limited wars. At the low-end of the spectrum of conflict, naval forces are not limited to confronting an adversary's navy or imposing a quarantine or blockade on seaborne trade, though these remain important missions. Modern naval forces are capable of projecting power landward with unprecedented range, accuracy, and lethality. Recent Navy tactical aircraft strikes against the air defense facilities in southern Iraq during Operation SOUTHERN WATCH, and surface ship launched Tomahawk land attack cruise missile (TLAM) strikes against the Iraqi Intelligence

Service Headquarters in Baghdad are two good examples. In a larger conflict, military objectives for naval forces might include "an adversary's port, naval base or coastal air base to allow the entry of heavy Army or Air Force forces."⁶⁴

Naval expeditionary forces have traditionally been at the forefront in response to regional threats. Naval expeditionary forces are: swift to respond given their forward presence; a Navy and Marine Corps 'sea-air-land' team capable of a broad range of action; able to sustain themselves for long-term operations; and, unrestricted by the need for transit or overflight approval from foreign governments in order to enter the scene of action.⁶⁵

Historically, five basic missions for expeditionary forces are evident -- protecting national interests, providing humanitarian relief, restoring order, punishing perceived insults or transgressions, and conducting initial combat operations at the outset of war.⁶⁶ "Naval expeditionary operations comprise those military campaigns undertaken short of war for specific political purposes, usually limited in scope, with little or no advanced warning or planning, and involving the use of rapidly deployed forces from outside the theater of operations."⁶⁷ This definition is acceptable today absent a global conflict and the need for expeditionary operations on the scale of Operation OVERLORD.

Naval expeditionary operations are nothing new. And with regard to naval intelligence, a recent article distinguished the

naval intelligence culture in the joint arena by saying, "We, uniquely, train our people to provide operational support to a Navy which, again uniquely, has been in a constant operational mode since the beginning of World War II."⁶⁸ The leadership of naval intelligence professionals in the area of operational intelligence is a trademark.

Threats. Past theorists are prone to think of two great sea powers in conflict. Today, however, it is necessary to examine the missions and strategies of inferior navies, just as Ensign Rogers had warned of the threat of 'second-rate naval powers.'⁶⁹ Several options are available to such lesser capable navies.

One is to maintain a 'fleet in being' as the Germans did with their High Seas Fleet in World War I and the French often did against the British with their sailing navy. Argentina did this during the Falklands conflict inflicting heavy losses on the Royal Navy through the use of land-based tactical aircraft.

A second option is to whittle the enemy down to fair odds in decisive battle. That was the Imperial Japanese Navy's training objective before World War II which resulted in tactics appropriate to inferiority, which from habit they exercised during the wartime period of Japanese superiority.

A third option is to catch the enemy with a temporary vulnerability and exploit it to gain command of the sea, as did Nimitz when the American fleet was outnumbered before the Battle of Midway. In this case, the inferior navy must be willing to take risk and act on an estimate of the enemy situation.

A fourth option is to establish local superiority, as the Germans did in the Baltic during World War II. Local superiority may be sufficient to suit a given littoral nation's strategic goals.

A fifth option available to an inferior navy is simple sea denial. Examples of this include the German U-boat campaign against shipping in both world wars, and the vast no man's land created by Iraq's extensive mining of the seaborne approaches to Kuwait prior to the Persian Gulf War.

Still another option is for a land power to achieve a maritime objective by action on land. An example of this would be the control or denial of a strait from a landward position of strength.

Critics of "... From The Sea" who say the Navy "lacks the capability to implement its concepts"⁷⁰ have a valid point. Some littoral threats tax the capabilities of our current systems and force structure, e. g., mines, sea-skimming cruise missiles, tactical ballistic missiles.⁷¹ But these critics must remember the White Paper is not a reflection of current capabilities. It is a vision statement, and herein lies a challenge for naval intelligence.

Key Operational Capabilities. "... From The Sea" identifies four key operational capabilities required to successfully execute the new direction of the Navy and Marine Corps: command control, and surveillance; battlespace dominance; power projection; and, sustainment.⁷² The shift in focus to littoral

operations requires a corresponding shift, adaptation, and/or development of intelligence capabilities to counter present and future littoral threats. Mastery of littoral threats can not be presumed. It does not derive necessarily from mastery of threats on the high seas.⁷³ I will address the first three of these key operational capabilities from an intelligence perspective. The basic framework for viewing this challenge at the macro-level is contained in *Table IV* below.

Table IV
Key Operational Capabilities &
Integrated Intelligence Functions

<i>Type Operation</i>	<i>Key Operational Capability</i>	<i>Integrated Intelligence Function</i>
<i>Defensive</i>	<i>Command, Control, Surveillance</i>	<i>Indications & Warning</i>
<i>Defensive-Offensive</i>	<i>Battlespace Dominance</i>	<i>Situation Assessment</i>
<i>Offensive</i>	<i>Power Projection</i>	<i>Targeting</i>

Command, Control, and Surveillance. The great strides made by naval operational intelligence during the Cold War in ocean surveillance now need to be applied to the littoral region. Streamlined sensor-to-shooter architectures encompassing seaward and landward threats in the condensed battlespace characterized by the littoral region, is imperative. New means of collection, immediately responsive to the operational commander's needs are warranted, given reduced warning and reaction time. The national and strategic *indications and warning* system, initially conceived to collect against the global communist-bloc threat, has distinct limitations in satisfying an operational

commander's *indications and warning* needs when operating in the littoral region against a variety of littoral threats. Admiral Nimitz would not have risked his inferior forces in the vicinity of Midway Island without adequate foreknowledge, and even then relied heavily on organic scouts to locate the enemy first.

Additionally, the extensive intelligence requirements of a Joint Force Commander (JFC) and Joint Force Air Component Commander (JFACC) afloat call for improved capabilities such as those exercised in OCEAN VENTURE 93.⁷⁴ Surveillance is not the only area which equates to 'intelligence.' Effective command and control is dependent on fully integrated intelligence collection, processing, and dissemination. The development of an Air Tasking Order (ATO) afloat would prove problematic without knowledge of the enemy, threat systems, current disposition, etc., given the need to apportion assets accordingly and make smart target nominations to the Joint Targeting Board (JTB). The ATO process serves to highlight the increased demands for and integration of intelligence operations, and the characteristic breadth of *maritime intelligence* encompassing seaward and landward battlespace. A naval component commander needs the full range of intelligence functionality to participate effectively in this joint process, and to operate independently in the littoral environment.

Battlespace Dominance. The littoral poses a number of challenges to naval forces. *Maritime intelligence* must address a variety of regional threats, each with its diversity of easily

acquired high-tech and equally effective low-tech weapon systems. In order to operate in the compressed battlespace of the near-land regime, the concept of battlespace dominance has extended the traditional sea control mission to include "land control" -- "extending the fleet's battlespace across the shoreline."¹⁵ Complete situation assessment is essential for effective battlespace dominance, down to and including complete tactical situation awareness. This is derived from operational-level reconnaissance and surveillance of seaborne and land-based threats within the theater of operations which is currently beyond the capabilities of existing shipboard sensors and equipment. The ability to respond appropriately to developing situations and imminent threats depends on timely and accurate *situation assessment*. High-value naval units can not afford to be susceptible to surprise or vulnerable to the first shot. The operational imperative to strike effectively first remains paramount. Technical knowledge of threat systems is also necessary for to know tactics, you must know weapons.¹⁶ General MacArthur's situation would have been precarious without the thorough knowledge which helped him establish the requisite sea control and air superiority for his advance.

Additionally, the confined and congested battlespace of the littoral regions complicates identification friend-or-foe (IFF) procedures and the development of simple rules of engagement (ROE). Improvements in *indications & warning* and *situation assessment* can help solve these problems by reducing

uncertainty.

Power Projection. "If we know where to aim, we can hit it. But knowing where to aim remains difficult."¹⁷ This is the essence of targeting and power projection. A comprehensive understanding of an adversary as a political, social, economic, and military system is necessary. By doing so, hard-kill and soft-kill options which minimize casualties and collateral damage would be available to us to defuse a crisis, or achieve war-winning objectives in the event of hostilities. "Pre-war activities should include establishing very specific targets that comprise an adversary's center of gravity -- to be destroyed as quickly as possible at the onset of hostilities."¹⁸ This type of targeting should be among the main efforts of today's joint intelligence centers, as was the case in General Eisenhower's JIC during World War II. Ideally, all of the targets, basic intelligence, and indications and warning on potential hot-spots would be readily available, and always make for smooth operations. But the reality is, limited resources and the unlimited scope of the problem, combined with the need for intelligence to be tailored to specific missions and the degree of difficulty inherent in acquiring certain information, preclude this from being the case.

CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

"And he had in his hand a little book open: and he set his right foot upon the sea, and his left foot on the earth."

Revelation 10:2⁷⁹

Joint Military Operations. The Goldwater-Nichols Department of Defense Reorganization Act of 1986 established the unified operational chain-of-command and institutionalized the concept of 'jointness.' As is evident from the research contained in this paper, unity of command and unity of effort are not newly found principles of war. Neither do today's joint intelligence centers represent a new organizational concept. Intelligence is not 'navy blue' or 'joint purple.' It is the 'gray matter' of successful warfighting.

The place for naval intelligence professionals to ensure their commander's requirements are satisfied is with forces afloat and in theater joint intelligence centers. For those in the Navy who would argue that placing the entire naval operational intelligence infrastructure into the joint arena has detracted from the fundamental relationship enjoyed by intelligence and command, it has not. It has reinforced it -- within the unified command structure.

"... From The Sea." The new direction in "... From The Sea," combined with this unified approach, drives the scope and focus

of naval intelligence to a broader *maritime intelligence*. The old Cold War OPINTEL emphasis on ocean surveillance now must encompass both *seaward and landward battlespace*. The generic analysis functions used in the past for sea control purposes apply equally well to the littoral battlespace, and across the spectrum of conflict. Indications and warning, situation assessment, and targeting -- more succinctly referred to as OPINTEL -- is part of the naval intelligence culture. Functionally, no change is required, but a new focus is in order.

Intelligence is a key ingredient for naval expeditionary forces to safely and effectively operate in the littoral regions of the world. However, there are shortfalls with respect to some littoral threats. Improvements in intelligence collection, processing, and dissemination, directly responsive to the theater- and operational-level commander's needs, are necessary to shore up these deficiencies. The White Paper states outright there are challenges ahead -- implicit challenges for naval intelligence.

Naval Operational Intelligence. Ensign Rogers helped create the New Navy by going back to basics. Theory, history, and practice, reveal certain enduring principles. Among these is that intelligence is an indispensable component of naval combat power. Changes in operational emphasis prescribe reorienting naval operational intelligence, as driven by required operational capabilities -- command, control, and surveillance,

battlespace dominance, and power projection. The sustained leadership of naval intelligence in the area of OPINTEL is needed to ensure the success of future operations. The eyes of naval intelligence should be focused on the littoral, with one eye set upon the sea and the other on the earth. Such an orientation will ensure the personnel and resources of the Office of Naval Intelligence continue to provide relevant intelligence, and thereby contribute positively to the success of future joint military operations from the sea.

NOTES

CHAPTER I INTRODUCTION

1. U.S. Navy Department, ... From The Sea: Preparing the Naval Service for the 21st Century (Washington, D.C.: September 1992), p. 2.
2. Joint Pub 0-2 (Initial Draft), Unified Action Armed Forces (Washington, D.C.: undated), pp. v - II-44.
3. Office of Naval Intelligence, Strategic Planning for the Office of Naval Intelligence: Vision and Direction for the Future (Washington, D.C.: July 1992), p. 2-25.
4. Jeffery Dorwart, The Office of Naval Intelligence: The Birth of America's First Intelligence Agency, 1865-1918 (Annapolis: Naval Institute Press, 1979), pp. 3-20. The post-Civil War era (1865-1882) marked a nadir for the Navy in terms of equipment, morale, and operational effectiveness, yet it also marked the turning point for the creation of the "New Navy" consisting of steam-powered, steel warships, armed with rifled ordnance, and expansionist doctrine. Rogers was among the officers who demanded improvements in naval equipment, organization, training, and doctrine.
5. Ibid., p. 16.
6. Ibid., p. 17.

CHAPTER II INTELLIGENCE AND COMMAND

7. Sun Tzu, The Art of War (NY: Oxford University Press, 1963), pp. 144-145.
8. Carl von Clausewitz, On War (Princeton: Princeton University Press, 1976), p. 117.
9. Baron de Jomini, The Art of War (Westport: Greenwood Press, 1862), p. 245.
10. Wayne Hughes, Fleet Tactics - Theory and Practice (Annapolis: Naval Institute Press, 1986), pp. 290-292. Taken from Landersman's Compilation of Principles of War. The Principles for Operations Other Than War are also consistent in this regard - *objective, unity of effort, legitimacy, perseverance, restraint, security* (FM 100-5 pp. 13-3 - 13-4)
11. Joint Test Pub 2-0, Doctrine for Intelligence Support to Joint Operations (Washington, D.C.: 1991), p. II-4.

12. These intelligence analysis functions are drawn from the author's experience as a planner with the USPACOM Theater Intelligence Architecture Program (TIAP) and as a career Naval Intelligence Officer.

13. Washington Platt, Strategic Intelligence Production (NY: Praeger Publishers, 1957), pp. 40-45.

14. Irving Heymont, Combat Intelligence In Modern Warfare (Harrisburg: The Stackpole Company, 1960), pp. 6-15.

15. Joint Pub 2-0, p. II-5.

16. Ibid., p. II-30.

17. NDP 2 (Draft), Naval Intelligence (Naval Doctrine Command: October 1993), pp. 16-23.

18. Ibid., pp. 9-11.

19. FM 100-5, Operations (Washington, D.C.: Department of the Army, 1993), p. 6-2.

20. This table is not intended to convey a lack of responsibility at the operational level for strategy, or that national level intelligence agencies do not provide operational or tactical intelligence. The emphasis is on the dual role of planning and execution at the operational level tied to the concept of operational art, the unified/joint force commander, and the corresponding role of the joint intelligence center.

21. Joint Test Pub 2-0, p. IV-15.

22. FM 34-1, Intelligence and Electronic Warfare Operations (Washington, D.C.: Department of the Army, 1987), p. 2-10.

23. NDP 2, pp. 12-15.

24. Joint Pub 1, Joint Warfare of the U.S. Armed Forces (Washington, D.C.: 1991), p. 35. .

CHAPTER III OPERATIONAL INTELLIGENCE IN WORLD WAR II

25. E.B. Potter, Nimitz (Annapolis: Naval Institute Press, 1976), p. 81. Layton was surprised Nimitz had retained him as Fleet Intelligence Officer after the failure to warn of the Japanese attack on Pearl Harbor but he was soon able to redeem himself somewhat with the combined efforts of Fleet Cryptologist Rochefort and their contribution to the victory at Midway.

26. For further elaboration on the tactical maxim to attack effectively first and thus the importance of reconnaissance see Hughes pp. 25, 38, 70, Ch. 5 World War II: The Sensory Revolution, Ch. 6 The Great Constants, Scouting p. 182.

27. Potter, p. 79. The only exception was Army ground forces in Hawaii under the command of General Emmons responsible for the defense of Hawaii itself. U.S. forces defending Midway were commanded by Admiral Nimitz.

28. Ibid., p. 87.

29. Ibid., p. 107.

30. Chief of Staff, War Department, Marshall Letter to MacArthur on the use of "Ultra" Intelligence (Washington, D.C.: War Department, May 23, 1944), p. 1. Declassified.

31. Chief of Staff, War Department, Marshall Letter to Eisenhower on the use of "Ultra" Intelligence (Washington, D.C.: War Department, March 15, 1944), p. 1. Declassified.

32. Charles Willoughby and John Chamberlain, MacArthur 1941-1951 (NY: McGraw-Hill Book Company, Inc., 1954), p. 145.

33. Ibid., p. 146.

34. Edward Drea, Ultra Intelligence and General Douglas MacArthur's Leap to Hollandia, January - April 1944, Michael Handel, Intelligence and Military Operations (London: Frank Cass and Company Limited, 1990), p. 324.

35. Although the Pacific Theater was divided into a Pacific Ocean Area commanded by Admiral Nimitz (CINCPOA) and Southwest Pacific Area commanded by General MacArthur (CINCSWPA), their respective strategic goals of sea control and air superiority were complementary, each promoting the further operational advance of the other.

36. Dwight Eisenhower, Crusade in Europe (NY: Da Capo Press, 1977), pp. 220-224.

37. F.H. Hinsley, British Intelligence in the Second World War - Its Influence on Strategy and Operations (NY: Cambridge University Press, 1988), p. 7.

38. Alfred Goldberg, Air Campaign Overlord: To D-Day, Eisenhower Foundation, D-Day: The Normandy Invasion In Retrospect (Wichita: University Press of Kansas, 1971), pp. 57-78.

39. Williamson Murray, "The Combined Bomber Offensive," Militargeschichtliche Mitteilungen, January 1992, p. 9.

40. Hinsley, pp. 103-224.

41. Jeffery Dorwart, Conflict of Duty: The U.S. Navy's Intelligence Dilemma, 1919-1945 (Annapolis: Naval Institute Press, 1983), p. 189.

42. Ibid., pp. 198-199. This joint effort included the joint interrogation of POW's, the preparation of joint intelligence reports, the production of Joint Army and Navy Intelligence Studies (JANIS), the development of Joint Intelligence Collection Agencies (JICA), etc.

43. Ibid., pp. 202-203.

44. Ibid., pp. 202-204.

45. Commander in Chief, U.S. Pacific Fleet and Pacific Ocean Areas, Narrative of the Combat Intelligence Center, Joint Intelligence Center, Pacific Ocean Areas (Honolulu: 8 December, 1945), pp. 9-13.

46. Edwin Layton, "And I Was There" (NY: William Morrow and Company, Inc., 1985), p. 470.

47. Hinsley, p. 751. JIC here refers to the Joint Intelligence Sub-Committee.

48. Willoughby, p. 98. Allied Translator and Interpreter Section (ATIS) interrogated prisoners of war and translated captured documents; Allied Intelligence Bureau (AIB) conducted clandestine operations, sabotage, and espionage behind enemy lines; Allied Geography Section (AGS) gathered and published geographic information; and, Central Bureau (CB) provided cryptanalytical services.

49. Commander in Chief, U.S. Pacific Fleet and Pacific Ocean Areas, p. 19.

50. Joint Pub 2-0, p. IV-10.

51. Dorwart, Conflict of Duty, pp. 217-227. See Ch. 20 Defining The Naval Interest.

CHAPTER IV THE NEW DIRECTION - "... FROM THE SEA"

52. Bernard Brodie, A Layman's Guide to Naval Strategy (Princeton: Princeton University Press, 1942), p. 148.

53. Hughes, p. 25. Hughes identifies five cornerstones of maritime warfare: 1) *men matter most*; 2) *doctrine is the glue of good tactics*; 3) *to know tactics, you must know weapons*; 4) *the seat of purpose is on land*; 5) *attack effectively first*.

54. Sir Francis Bacon quoted in Julian Corbett Some Principles of Maritime Strategy (London: Longmans, Green, and Company, 1911), p. 48.

55. Corbett, p. 11.

56. "... From The Sea," p. 5. Seaward is defined as the "area from the open ocean to the shore which must be controlled to support operations ashore."

57. Ibid. Landward is defined as the "area inland from the shore that can be supported and defended directly from the sea."

58. Alfred Vagts, Landing Operations - Strategy, Psychology, Tactics, Politics, From Antiquity To 1945 (Harrisburg: Military Service Publishing Company, 1946), p. 1.

59. "... From The Sea," pp. 1-2.

60. Norman Friedman, The U.S. Maritime Strategy (Annapolis: Naval Institute Press), p. 56.

61. Brodie, p. 148.

62. Bradd Hayes, "Keeping the Naval Service Relevant", Proceedings, October 1993, p. 57.

63. Ibid.

64. "... From The Sea," p. 4.

65. Ibid., p. 3.

66. Scott Moore, "Looking Back at the Future: The Practice and Patterns of Expeditionary Operations in the 20th Century," Marine Corps Gazette, August 1993, p. 75.

67. Ibid., p. 74.

68. Bob Curts, "The Culture of Naval Intelligence," Naval Intelligence Professionals Quarterly, Winter 1994, p. 15.

69. Hughes, pp. 228-229.

70. Hayes, p. 57.

71. "... From The Sea," p. 5.

72. Ibid., pp. 7-10.

73. Ibid., p. 5.

74. Floyd Kennedy, "Ocean Venture 93 - Commanding a Joint Air Campaign -- From A Ship?" Proceedings, August 1993, pp. 34-35.
75. James Blaker, "New Navy Strategy a Sea Change," Armed Forces Journal International, November 1992.
76. Hughes, p. 25.
77. Barry Watts quoted in James Tritten "Non-Traditional Forms of Intelligence," Unpublished Research Paper, Naval Post Graduate School, Monterey, CA: 1993.
78. C. Mott, "Naval Forces After ... From The Sea," Proceedings, September 1993, p. 45.

CHAPTER V CONCLUSIONS AND RECOMMENDATIONS

79. Vagts, taken from opening page.

BIBLIOGRAPHY

Blaker, James. "New Navy Strategy a Sea Change." Armed Forces Journal International, November 1992.

Brodie, Bernard. A Layman's Guide To Naval Strategy. Princeton: Princeton University Press, 1942.

Buell, Thomas. The Quiet Warrior: A Bibliography of Raymond A. Spruance. Annapolis: Naval Institute Press, 1987.

Bullock, Joan. "Joint Intelligence Support for Naval Air Employment in Support of Land Campaigns." Unpublished Research Paper, Air War College, Maxwell Air Force Base, Alabama: 1989.

Burgess, Ronald. "Operational Intelligence: Is It A Panacea?" Unpublished Research Paper, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas: 1987.

Canfield, Jeffrey. "Gerbil Redux: What Course Ahead For Naval Intelligence?" International Journal of Intelligence and CounterIntelligence, Fall 1993, pp. 271-295.

Chief-of-Staff, War Department. Marshall Letter to Eisenhower on the use of "Ultra" Intelligence. Washington, D.C.: War Department, March 15, 1944. Declassified.

Chief-of-Staff, War Department. Marshall Letter to MacArthur on the use of "Ultra" Intelligence. Washington, D.C.: War Department, May 23, 1944. Declassified.

Clausewitz, Carl von. On War. Princeton: Princeton University Press, 1976.

Commander-in-Chief, U.S. Pacific Fleet and Pacific Ocean Areas. Narrative of the Combat Intelligence Center, Joint Intelligence Center, Pacific Ocean Areas. Honolulu: 8 December, 1945.

Corbett, Julian. Some Principles Of Maritime Strategy. London: Longmans, Green and Company, 1911.

Curts, Bob. "The Culture of Naval Intelligence." Naval Intelligence Professionals Quarterly, Winter 1994.

Cushman, John. "A New Era." Proceedings, August 1993.

Dorwart, Jeffery. The Office of Naval Intelligence: The Birth of America's First Intelligence Agency, 1865-1918. Annapolis: Naval Institute Press, 1979.

Dorwart, Jeffery. Conflict of Duty: The U.S. Navy's Intelligence Dilemma, 1919-1945. Annapolis: Naval Institute Press, 1983.

Eisenhower, Dwight. Crusade In Europe. NY: Da Capo Press, 1977.

Estvanik, Robert. "Intelligence and the Commander: Desert Shield/Storm Case Study." Unpublished Research Paper, U.S. Naval War College, Newport, RI: 1992.

FM 34-1. Intelligence and Electronic Warfare Operations. Washington, D.C.: Department of the Army, 1987.

FM 100-5. Operations. Washington, D.C.: Department of the Army, 1993.

FMFM 3-21. MAGTF Intelligence Operations. Washington, D.C.: Department of the Navy, 1991.

Friedman, Norman. The U.S. Maritime Strategy. Annapolis: Naval Institute Press, 1988.

Frketic, John. "Operational Intelligence and the U.S. Army: Much Ado About Nothing or Misunderstood Excellence? A Prescription for the 1990's and Beyond." Unpublished Research Paper, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas: 1989.

Goldberg, Alfred. Air Campaign Overlord: To D-Day. Eisenhower Foundation, D-Day: The Normandy Invasion In Retrospect. Wichita: University Press of Kansas, 1971.

Goodman, Glenn. "Navy-Marine Team Redefines Expeditionary Warfare." Armed Forces Journal International, August 1993.

Gourley, Robert. "Time for a Joint Ship." Proceedings, January 1994.

Handel, Michael. Intelligence And Military Operations. London: Frank Cass and Company Limited, 1990.

Handel, Michael. Leaders And Intelligence. London: Frank Cass and Company Limited, 1989.

Handel, Michael. Masters Of War: Sun Tzu, Clausewitz, And Jomini. London: Frank Cass and Company Limited, 1992.

Hayes, Bradd. "Keeping the Naval Service Relevant." Proceedings, October 1993.

Heymont, Irving. Combat Intelligence In Modern Warfare. Harrisburg: The Stackpole Company, 1960.

Hinsley, F.H. British Intelligence In The Second World War - Its Influence On Strategy And Operations. NY: Cambridge University Press, 1988. 3v.

Holmes, W. J. Double Edged Secrets: U.S. Naval Intelligence Operations In The Pacific During World War II. Annapolis: Naval Institute Press, 1979.

Hughes, Wayne. Fleet Tactics - Theory and Practice. Annapolis: Naval Institute Press, 1986.

Joint Pub 1. Joint Warfare of the U.S. Armed Forces. Washington, D.C.: CJCS, 11 November 1991.

Joint Pub 0-2 (Initial Draft). Unified Action Armed Forces. Washington, D.C.: Joint Staff, undated.

Joint Test Pub 2-0. Doctrine For Intelligence Support To Joint Operations. Washington, D.C.: Joint Staff, 1991.

Jomini, Baron de. The Art Of War. Westport: Greenwood Press Publishers, 1862.

Keller, Brian. "Avoiding Surprise: The Role of Intelligence Collection and Analysis At the Operational Level of War." Unpublished Research Paper, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas: 1992.

Kennedy, Floyd. "Commanding A Joint Air Campaign -- From A Ship?" Proceedings, August 1993.

Koch, Oscar. G-2: Intelligence For Patton. Philadelphia: Whitmore publishing Company, 1971.

Layton, Edwin. "And I Was There". NY: William Morrow and Company, Inc., 1985.

Marks, James. "In Search of the Center of Gravity: Operational Intelligence Preparation of the Battlefield." Unpublished Research Paper, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas: 1990.

Moore, Scott. "Looking Back at the Future: The Practice and Patterns of Expeditionary Operations in the 20th Century." Marine Corps Gazette, August 1993.

Mott, C.P. "Naval Forces After ... From the Sea." Proceedings, September 1993.

Murray, Williamson. "The Combined Bomber Offensive." Militargeschichtliche Mitteilungen, January 1992.

NDP 2 (Draft). Naval Intelligence. Norfolk, VA: Naval Doctrine Command, 1993.

O'Brien, E. T. "From The Sea -- to Where?" Marine Corps Gazette, August 1993.

Office of Naval Intelligence. Strategic Planning for the Office of Naval Intelligence: Vision and Direction for the Future. Washington, D.C.: July 1992.

Pierce, Terry. "The Naval Expeditionary Force." Proceedings, November 1993.

Platt, Washington. Strategic Intelligence Production. NY: Praeger Publishers, 1957.

Poirier, Michael. "Sea Control and Regional Warfare." Proceedings, July 1993.

Potter, E. B. Nimitz. Annapolis: Naval Institute Press, 1976.

Ramsdell, Douglas. "Keeping the Coast Clear." Proceedings, November, 1992.

Rosello, Victor. "The Origins Of Operational Intelligence." Unpublished Research Paper, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas: 1989.

Sun Tzu. The Art Of War. NY: Oxford University Press, 1963.

Tritten, James. "Non-Traditional Forms of Intelligence." Unpublished Research Paper, Naval Post Graduate School, Monterey, CA: 1993.

Tusa, Francis. "New Threat Stalks Gulf Waters." Armed Forces Journal International, November 1992.

U.S. Navy Department. ... From The Sea: Preparing the Naval Service for the 21st Century. Washington, D.C.: Department of the Navy, September, 1992.

Vagts, Alfred. Landing Operations - Strategy, Psychology, Tactics, Politics, From Antiquity To 1945. Harrisburg: Military Service Publishing Company, 1946.

Wickman, Wayne. "Institutionalizing Operational Intelligence In The Joint Environment." Unpublished Research Paper, U.S. Naval War College, Newport, RI: 1990.

Willoughby, Charles and Chamberlain, John. MacArthur 1941-1951.
NY: McGraw-Hill Book Company, Inc., 1954.